



No.3813

2SJ228

## P-Channel MOS Silicon FET

## Very High-Speed Switching Applications

## Features

- Small ON resistance.
  - Very high-speed switching.
  - Low-voltage drive.
  - Meets radial taping.

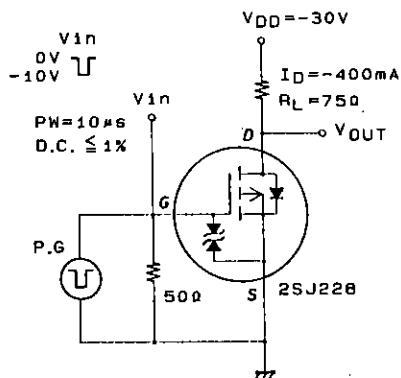
#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Absolute Maximum Ratings at $T_A = 25^\circ C$		unit
Drain to Source Voltage	$V_{DSS}$	-60 V
Gate to Source Voltage	$V_{GSS}$	$\pm 15$ V
Drain Current (DC)	$I_D$	-0.8 A
Drain Current (Pulse)	$I_{DP}$	PW $\leq 10\ \mu s$ , duty cycle $\leq 1\%$ -3.2 A
Allowable Power Dissipation	$P_D$	1 W
Channel Temperature	$T_{ch}$	150 $^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150 $^\circ C$

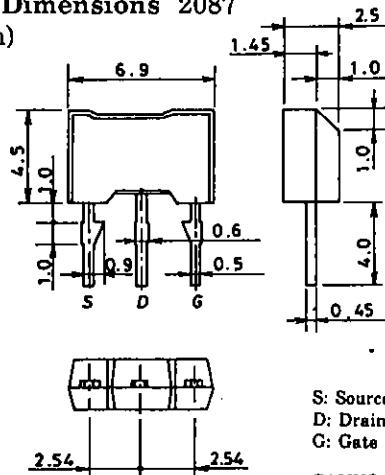
### Electrical Characteristics at Ta = 25°C

Electrical Characteristics at $T_A = 25^\circ C$		min	typ	max	unit
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0$	- 60		V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -60\text{V}, V_{GS} = 0$		- 100	$\mu\text{A}$
Gate to Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 12\text{V}, V_{DS} = 0$		$\pm 10$	$\mu\text{A}$
Cutoff Voltage	$V_{GS(\text{off})}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	- 1.0	- 2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}, I_D = -400\text{mA}$	0.5	0.9	S
Static Drain to Source on State Resistance	$R_{DS(\text{on})}$	$I_D = -400\text{mA}, V_{GS} = -10\text{V}$	0.9	1.2	$\Omega$
	$R_{DS(\text{on})}$	$I_D = -400\text{mA}, V_{GS} = -4\text{V}$	1.2	1.6	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	160		pF
Output Capacitance	$C_{oss}$	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	60		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	10		pF
Turn-ON Delay Time	$t_{d(\text{on})}$	See specified Test Circuit.	10		ns
Rise Time	$t_r$	"	12		ns
Turn-OFF Delay Time	$t_{d(\text{off})}$	"	75		ns
Fall Time	$t_f$	"	30		ns
Diode Forward Voltage	$V_{SD}$	$I_S = -800\text{mA}, V_{GS} = 0$	- 0.9		V

### **Switching Time Test Circuit**



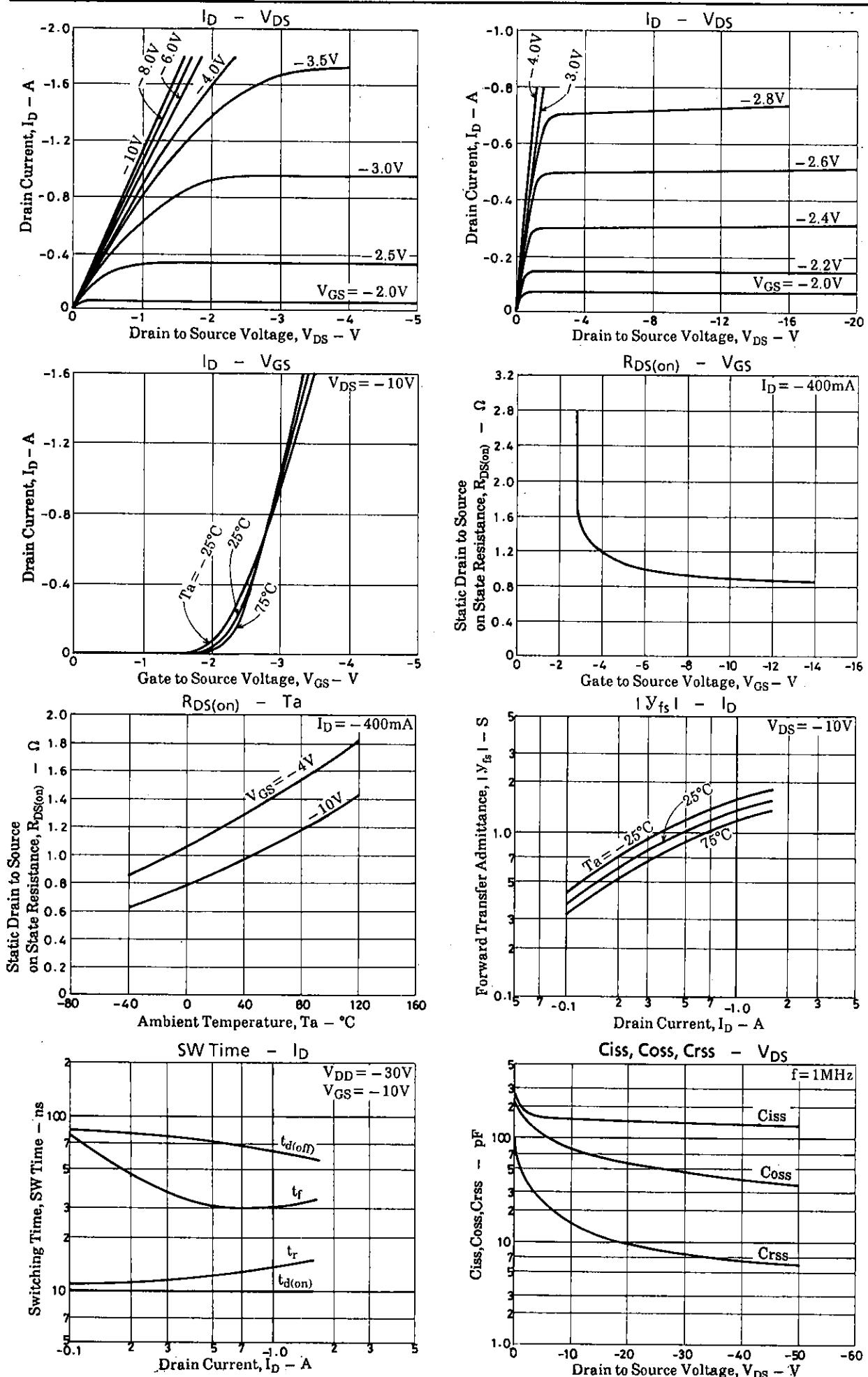
## **Package Dimensions 2087 (unit : mm)**

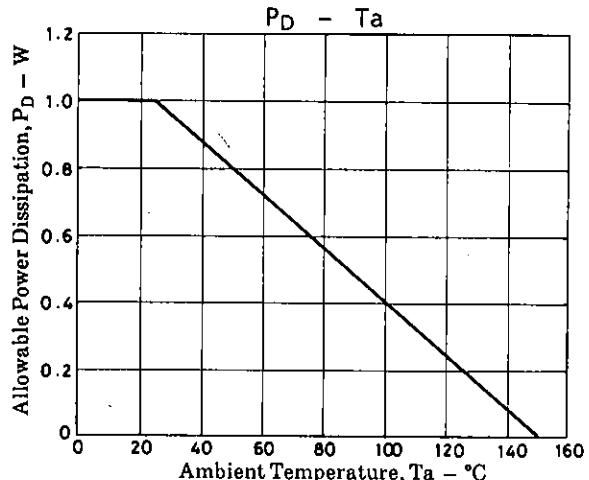
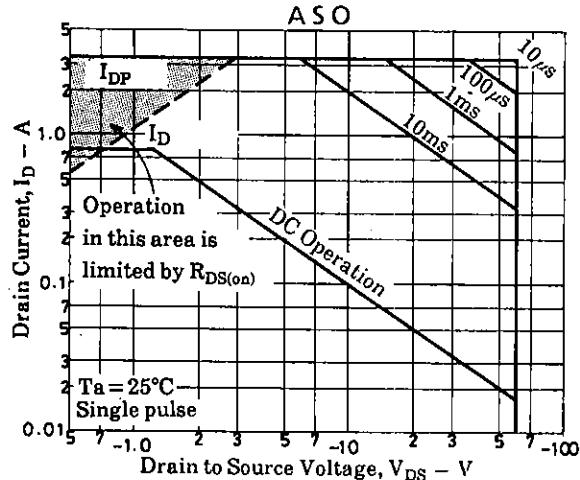


S: Source  
D: Drain  
G: Gate

SANYO: NMP

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